

REMARKS

Claims 1-7 are all the claims pending in the application. Claims 1-7 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 1-4 and 7 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Kaufman (U.S. Patent No. 4,191,505). Claims 5 and 6 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Kaufman in view of Harner (U.S. Patent No. 4,189,648).

FORMALITIES

As a preliminary matter, the Examiner has objected to the drawings for several reasons. First, the Examiner asserts that the drawing does not show an annular air passage. In the concurrently filed Request for Approval of Proposed Drawing Corrections, Applicant proposes to label the annular air passage.

Second, the Examiner states that the reference character "8" has been designated for both the stator and the tubular sleeve. In the drawings, on the one hand, the stator has been designated with the reference character "3," and the tubular sleeve with the reference character "8." Page 3, line 18 of Applicant's specification, on the other hand, erroneously identifies both the stator and tubular sleeve as reference character "8." Thus, the specification has been amended to correctly identify the stator and tubular sleeve.

Third, the Examiner has concerns regarding the tubular sleeve (see paragraph 3, page 2 of the Office Action). The tubular sleeve 8 creates along the fairing 7 an air (annular) passage 12 for cool air to flow along and in contact with the fairing 7 to cool it. The propeller 5 is driven

substantially by the wind created outside the tubular sleeve 8 and slightly by the air that passes through the air passage 12.

Based on the foregoing, Applicant respectfully requests the withdrawal of the objections.

The Examiner has rejected claims 1-7 under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the Examiner states that the phrase “interference fit,” in claim 3, is vague and unclear. Applicant disagrees for the following reason.

The phrase “interference fit” is a standard term of art used, for example, in both the mechanical and design engineering arts. Interference fit is defined as “a fit between the mating parts of a male and female assembly in which one of the parts is forced into the other to allow maximum metal overlap.”¹

Further, the Examiner has concerns regarding the “lateral openings” of the stator (paragraph number 5, pages 2-3). Applicant respectfully directs the Examiner to Applicant’s page 3, lines 17-23, which states “lateral openings 11 pass through the stator 3 so as to direct the hot air created by rotation of the rotor 4 against the fairing 7 so that the hot air is cooled by flowing along the fairing 7 which acts as a heat exchanger with the air on the outside of the pod 1.” In other words, the lateral (horizontal) openings 11 of the stator 3 direct or vent hot air created by the rotor 4 against the fairing 7 of the pod 1.

¹Academic Press Dictionary of Science and Technology, Academic Press, 1995.

Based on the foregoing, Applicant respectfully requests the withdrawal of the § 112, second paragraph, rejection.

PRIOR ART REJECTIONS

The Examiner has rejected claims 1-4 and 7 under 35 U.S.C. § 102(b) as being anticipated by Kaufman. Applicant respectfully traverses this rejection.

Kaufman fails to teach or suggest Applicant's claimed "pod," as required by claim 1. Claim 1 requires "a wind-power generator pod comprising a rigid fairing in which at least one electricity generator is disposed for coupling to at least one wind-driven propeller, wherein the rigid fairing of the pod is formed by the body of the generator in which a stator and a rotor are mounted."

Kaufman does not teach or suggest Applicant's "rigid fairing in which at least one *electricity generator* is disposed for coupling to at least one wind-driven propeller (emphasis added)." In fact, there is no teaching in Kaufman of an electrical generator which is coupled to the wind propeller 28. The wind propeller 28 is coupled to the housing 12 via an axle 30. Indeed, an axle 30 is not analogous to an electrical generator.

Conversely, as illustrated in Applicant's Figure 1, the fairing 7 of the pod 1 includes the enclosure of the electric generator, which is coupled to a propeller 5. The electric generator has a rotor 4 and a stator 3. The stator 3 comprises stacked magnetic metal plates having recesses in which electric windings are placed. Such assembly is located in an enclosure that constitutes the external fairing 7 of the generator.

Correspondingly, Kaufman does not teach or suggest the claim limitation “the rigid fairing of the pod is formed by the body of the generator in which a stator and a rotor are mounted.” Since Kaufman fails to teach or suggest Applicant’s “electrical generator,” the fairing of the pod cannot be formed by the “body of the generator in which a stator and a rotor are mounted.”

Since Kaufman does not teach each and every limitation of claim 1, Kaufman cannot anticipate this claim. Thus, the rejection should be withdrawn.

Dependent claims 2-4 and 7 are dependent on independent claim 1, and should be allowable for the same reasons discussed above with respect to claim 1. Further, dependent claims 2-4 are patentable based on the limitations contained therein. For example, dependent claim 2 requires that the “rigid fairing of the pod is surrounded by a tubular sleeve.” As illustrated in Figures 1 and 2 of Kaufman, there is no tubular sleeve, but rather a housing (pod) 12 that is not surrounded by a tubular sleeve.

Dependent claim 3 requires that “the fairing of the pod intimately contacts the stator of the generator.” As stated above, Kaufman does not teach or suggest a stator.

Dependent claim 4 requires “lateral openings [that] extend through the stator.” Since Kaufman does not teach or suggest a stator, Kaufman cannot teach or suggest lateral openings which extend through the stator.

The Examiner has rejected claims 5 and 6 under 35 U.S.C. § 103(a) as being unpatentable over Kaufman Harner. Applicant respectfully traverses this rejection.

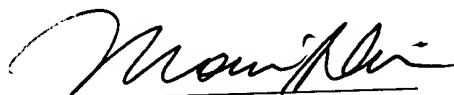
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Dependent claims 5 and 6 are dependent on independent claim 1, and should be allowable for the same reasons discussed above with respect to claim 1.

In view of the foregoing, the claims are now believed to be in form for allowance, and such action is hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to **call the undersigned** at the telephone number listed below.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The specification is changed as follows:

Page 2, first full paragraph:

To further increase heat exchange between the stator and the fairing of the pod, provision can be made for the fairing of the pod to be an interference fit on or to intimately contact the stator of the generator. This arrangement also reinforces the mechanical cohesion of the elements mounted inside the pod and reduces vibration phenomena.

Page 2, seventh full paragraph:

An electricity generator constituted by a stator 3 and a rotor 4 (shown in part in the figure above the axis A) is mounted inside the pod 1 and is coupled to a least one propeller ~~such as 5~~ via an epicyclic gearbox (stepdown gearbox) 6.

Page 2, eighth full paragraph:

The rigid outer fairing 7 of the pod 1 is formed by the metal body of the generator. ~~It~~ The outer fairing 7 is surrounded coaxially by a tubular sleeve 8 which forms an annular passage 12 for the wind V driving the propeller 5. The end of the sleeve 8 facing the wind V is flared in this case and the propeller 5 is mounted at the back of the pod 1 relative to the wind direction so as to maintain a degree of stability in the flow of air along the passage 12 formed by the sleeve 8. The gearbox 6 is mounted inside the fairing 7 and the propeller 5 is fixed directly to the outlet of the shaft, thereby simplifying mechanical assembly and in particular simplifying coupling between the generator and the gearbox.

Page 3, first full paragraph:

The sleeve 8 can be held at a distance from the fairing 7 by means of supporting cross-members ~~such as~~ 9.

Page 3, second full paragraph:

~~The~~ A system 10 for steering the pod 1 is shown as being integrated in the top of the mast 2, but ~~it equally well can~~ be located inside the pod 1 which would contribute to simplifying installation of the wind-power generator.

Page 3, third full paragraph:

The fairing 7 is advantageously an interference fit on or intimately contacts the stator ~~8-3~~, and lateral openings 11 pass ~~right~~ through the stator 3 so as to direct the hot air created by rotation of the rotor 4 against the fairing 7 so that ~~said the~~ hot air is cooled by flowing along the fairing 7 which acts as a heat exchanger with the air on the outside of the pod 1.

IN THE CLAIMS:

The claims are amended as follows:

1~~+~~.____(Amended) A wind-power generator pod ~~constituted by~~ comprising a rigid fairing in which at least one electricity generator is disposed for coupling to at least one wind-driven propeller, wherein the rigid fairing of the pod is formed by the body of the generator in which a stator and a rotor are mounted.

2~~+~~.____(Amended) The pod according to claim 1, in which the rigid fairing of the pod is surrounded by a tubular sleeve forming a substantially annular air passage along the pod.

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3~~+~~____(Amended) The pod according to claim 1, in which the fairing of the pod is an interference fit on the stator of the generator.

4~~+~~____(Amended) The pod according to claim 1, in which lateral openings extend ~~right~~ through the stator.

5~~+~~____(Amended) The pod according to claim 1, in which the generator is coupled to the wind-driven propeller via an epicyclic gearbox.

6~~+~~____(Amended) The pod according to claim 5, in which said gearbox is mounted inside said rigid fairing.

7~~+~~____(Amended) A wind-powered generator comprising a pod according to claim 1 and mounted to swivel at the end of a mast.